

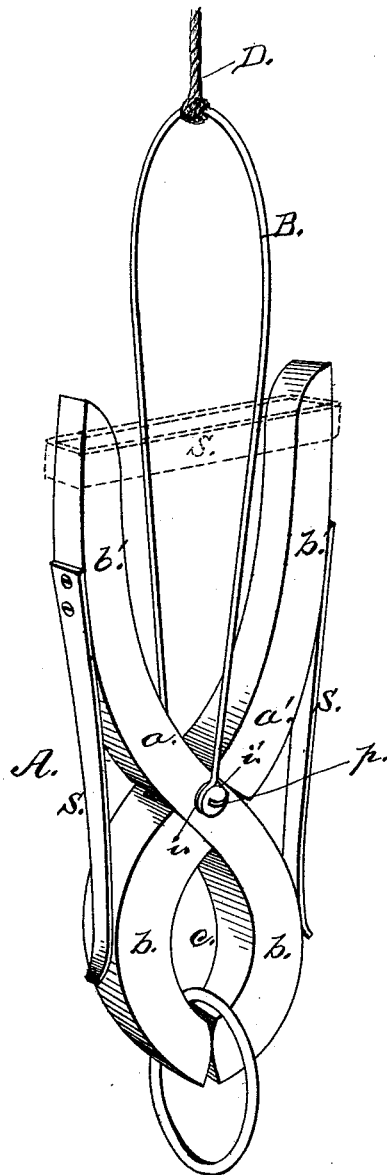
J. O. KNAPP.

Device for Suspending and Detaching Harness.

No. 221,579.

Patented Nov. 11, 1879.

Fig. 1.



WITNESSES

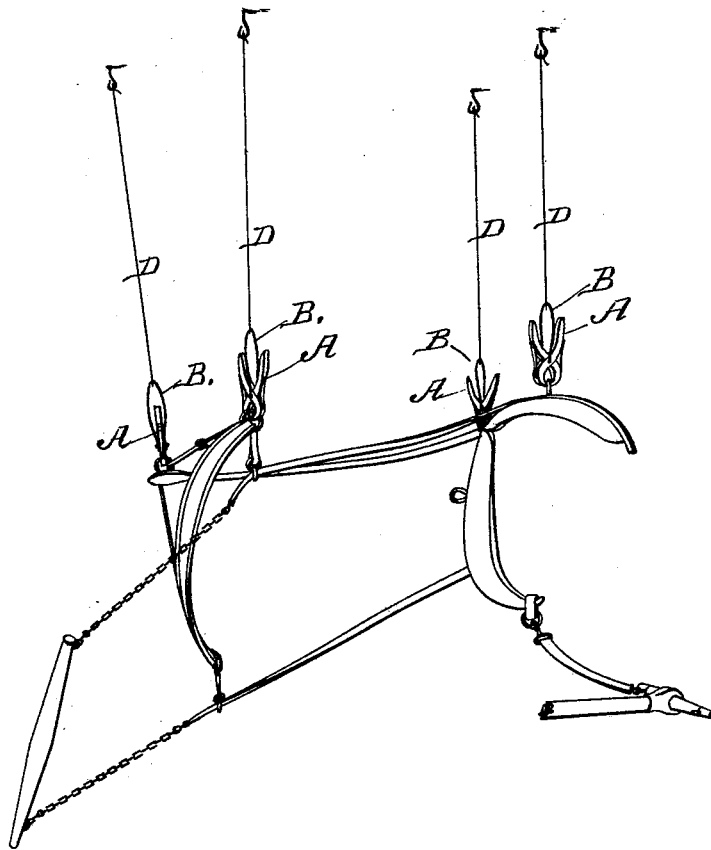
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Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN O. KNAPP, OF ST. JOSEPH, MISSOURI, ASSIGNOR TO HIMSELF, SAMUEL M. CARSON, AND MICHAEL M. KANE, OF SAME PLACE.

IMPROVEMENT IN DEVICES FOR SUSPENDING AND DETACHING HARNESS.

Specification forming part of Letters Patent No. **221,579**, dated November 11, 1879; application filed October 4, 1879.

To all whom it may concern:

Be it known that I, JOHN O. KNAPP, of St. Joseph, in the county of Buchanan and State of Missouri, have invented a new and valuable Improvement in Devices for Suspending and Detaching Harness; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a perspective view of my improved griper for suspending harness; and Fig. 2 is a perspective view of the same, illustrating its use in suspending harness.

This invention has relation to improvements in means for suspending harness for the horses of fire-engines, hose-carriages, hook-and-ladder trucks, and other analogous vehicles where it is desirable to hook up with the least possible delay.

The nature of the invention consists in a spring clasp or griper in a metallic bail, and suspended from the ceiling or rafters by a suitable cord, designed to be attached to any convenient part or parts of the harness, whereby the team may be put in position at the tongue, and the harness dropped or pulled onto it, as will be hereinafter more fully set forth.

In the annexed drawings, the letter A designates the clamp or griper, consisting, essentially, of two legs, *a a'*, crossed and pivoted to each other by means of the pin *p*. These legs or branches are in their nature levers, and their gripping ends *b* are bent inward toward each other, forming an eye, *c*.

The ends *b* are held in contact with each other by means of a spring, *S*, that may be made of rubber, and encompass the power ends of the levers, as shown, or of steel, in which case one end will be fastened to the part *b'* of each lever, and bear with its free end against the outer rounded edge of the gripe ends *b*; or I may use a spiral spring, if I so elect, between the parts *b'*.

The pin *p* extends at each end beyond the griper sides, to afford journals *j'* for the eyes *i* on the end of a metallic bail, *B*, that is applied thereto. This bail is sufficiently wide

and long to allow the clamp or griper to swing freely through it in order to attach it conveniently to the harness, and allow the levers to have unobstructed play. This clamp or griper is made usually of hard wood, and is suspended from the ceiling or rafters by means of a cord, *D*, attached to the bail.

In practice I generally use four of these clamps to each harness, and rings may be secured to the same in appropriate positions, which rings are introduced into the clamp or griper by pressing the parts *b'* apart, inserting the ring in the opening, and then releasing the lever, when the springs *S* will cause the jaws *b* to close and hold the rings engaged. One of these rings is secured to the center of the collar, another to the hames, about two inches above the tug, a third at the center of the hip or back strap, and the fourth in the ring of the breeching, near the tug, as shown in Fig. 2.

The horse being in position, the hostler seizes the collar at its lower ends and pulls the harness upon him. The clasps are then disengaged from the harness, and the act of hooking-up is complete. By this means the necessity of keeping the horses always harnessed in their stalls is effectually prevented, without any delay in making a start. This is due to the fact that the traces remain always attached to the whiffletree, the pole strap or chain to the pole, and that there remains only the securing of the collar and hames.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the spring-clamp A, having the journals *j'*, of the bail B, having eyes *i* applied on said journals, substantially as set forth.

2. The spring-clasp consisting of the crossed pivoted levers *a a'*, having their clamping ends turned inward, and the spring or springs *S*, holding said ends in contact, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOHN OLIVER KNAPP.

Witnesses:

JAMES H. BRISTOL,
MICHAEL M. KANE.